

Jens Müller, et al
Serial No.: 10/623,468

AMENDMENTS TO THE CLAIMS

Before claim 1, change CLAIMS to WE CLAIM:

Cancel claims 1-9 without prejudice or disclaimer of the subject matter therein and substitute new claims 10-19 therefor:

Claims 1-9 (cancelled)

10. (new) A proximity switch having a coil former (3) which is fitted with at least one coil (4, 5, 6), has an associated board (8) and is held by a plastic housing (1), and having an electrically conductive shield (2) between the coil former (3) and the inner wall of the plastic housing (1), with the shield (2) making electrically conductive contact with a circuit (9) which is mounted on the board (8), wherein the shield (2) is formed by an electrically conductive inner wall coating on the plastic housing (1).

11. (new) The proximity switch as claimed in claim 10, wherein the coating is a copper nickel tin alloy.

12. (new) The proximity switch as claimed in claim 10, wherein the coating has the following composition: 38% copper, 42% nickel and 20% tin.

13. (new) The proximity switch as claimed in claim 10, further comprising a metallic shielding ring (7), which surrounds the electrical circuit (9), and serves as a connection between the shield (2) and the electrical circuit (9).

14. (new) The proximity switch as claimed in claim 10, wherein the coating (2) can be soldered.

15. (new) The proximity switch as claimed in claim 10 wherein the coating (2) is thicker than 200 nm.

16. (new) The proximity switch as claimed in claim 10, wherein the thickness of the coating (12) is between $0.5\ \mu\text{m}$ and $20\ \mu\text{m}$.

17. (new) The proximity switch as claimed in claim 10, wherein the resistance of the coating, measured at a distance of 5 mm with a measurement current of 1mA, is in the range between $10\ \Omega$ and $50\ \Omega$.

18. (new) The proximity switch as claimed in claim 17, wherein the resistance of the coating is in a range between $20\ \Omega$ and $30\ \Omega$.

19. (new) The proximity switch as claimed in claim 10, further comprising a contact lug (10) which is soldered to the coating for connecting the coating to the circuit (9).